

A NEW SPECIES OF *CENTROSEMA* (LEGUMINOSAE) FROM NICARAGUA AND A KEY TO THE SPECIES IN CENTRAL AMERICA¹

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Seymour (1978a) reports four new species of *Centrosema* from Nicaragua, viz. *C. angustifolium* (H.B.K.) Benth., *C. plumieri* (Turp.) Benth., *C. pubescens* Benth, and *C. virginianum* (L.) Benth. However, a specimen of this genus deposited at the herbarium in Paris (P) which was examined in the course of a monographic study of the genus *Clitoria* (Fantz, 1977), does not accord with these or any other previously described species reported from Central America as listed in revisions and New World floras (e.g. Bentham, 1837, 1839; Standley, 1928; Standley and Record, 1936; Standley and Steyermark, 1946). The new species has larger flowers and bracteoles similar to *C. plumieri*, but is easily distinguished by the leaflet shape, longer calyx lobes, and the failure of the plant to turn black when dried.

Nicaragua, the largest country in Central America, has but one published flora (Ramírez Goyena, 1909–1911), which is reported to be of little value (Blake and Atwood, 1942). A retired minister and botanist, Frank C. Seymour, at the age of seventy-three, began a personal cataloguing of the Flora of Nicaragua in 1968. He made seven expeditions to Nicaragua to study the flora firsthand and to collect representative specimens, plus purchasing a number of Nicaraguan collections made by other scientists doing research in that country. This project was financed from Seymour's own personal funds and through the sale of duplicate herbarium specimens. Seymour (1978b) summarized his several publications on his expeditions and on the flora of Nicaragua. Now an octogenarian, Seymour's research is culminating in a manuscript which provides a checklist of the flora of Nicaragua. This new species of *Centrosema* is named in honor of Frank C. Seymour in recognition of his contribution to the botanical knowledge of Nicaragua.

CENTROSEMA seymourianum Fantz, sp. nov.

Folia trifoliata, glabrata; foliola elliptico-oblonga, breviacuminata, infra sparsim

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puberula trichomatibus appressis secus nervos majories. Pedunculi axillares, plurifloribus apicem pedunculorum congestis. Flores grandes, resupinati, 5.5–6 cm longi; vexillum extus sericeo-villosum. Bracteolae elongatae, calycem subaequant, 10–20 mm longae, 4–5 mm latae. Calyx late campanulatus, tubo 4–5 mm longa; dentes superi et laterales tubo vix longiores, 5–7 mm longi; dens ventralis elongatus, 13–15 mm longus; calycis pubescentia inconspicua, in dente ventrali densior, trichomatibus uncinatis. Legumen incognitum.

Scandent herb; stems terete, faintly angular, longitudinally striated, hollow, 2–3 mm thick, weakly twining, pubescence scattered, pilose and uncinata (observed latter at 30X). Leaves 3-foliolate, petiolate, glabrate; leaflets pinnate, broadly elliptic-oblong, rapidly short-acuminate, apex mucronate, base rotund, primary nerves of 10–12 pairs, upper surface green, glabrous, lower surface concolorous, very sparsely pubescent with appressed trichomes along major nerves, lamina 12–13.5 cm long, 6–8 cm wide. Petioles subquangular-terete, densely pilose on pulvinus, sparsely so above, 5 cm long; rachis similar, ca 2.5 cm; petiolules quadrangular, pilose, 6–8 mm. Stipules ovate, striate, persistent, 4–6 mm long, 0.6–0.8 mm wide; stipels to 6 mm long. Inflorescence axillary, shorter than the petioles, several-flowered crowded at the apex of the peduncle; peduncles one or two per node, 2–2.5 cm. long, moderately densely pubescent, trichomes short, subappressed; pedicels paired, 8–9 mm. Bracts deciduous, ovate, striate, 6–7 mm long, 2–3 mm wide. Bracteoles enclosing calyx and flower in bud, large, coriaceous, striated, ovate-oblong, ciliolate, 10–12 mm long, 4–5 mm wide. Flowers large, papilionaceous, resupinate, 5.5–6 cm long. Calyx broadly campanulate, upper teeth widely separated from lateral and lower teeth, sparsely pubescent on tube but more densely on teeth, particularly the ventral tooth, trichomes uncinata, inconspicuous (observe at 30X), to 0.5 mm long; calyx tube 4–5 mm long, 4 mm wide at base expanding rapidly to 11 mm wide at throat; calyx teeth longer than the tube, upper teeth 5 mm long, 2 mm wide, lateral teeth 7 mm long, 1.7 mm wide, ventral tooth elongated, complicate, 13–15 mm long, 2.5 mm wide at the base. Vexillum broad, ca. 4.5–4.8 cm wide, complicate, densely sericeous-villosus on the outer surface, bearing a basal pouch ca 6 mm in diam. above the 4 mm long claw, and with a broad 1.8 mm sinus above the pouch and between it and a 3 mm long spur. Alae, carina, androecium, and gynoecium hidden within the complicate vexillum glued to the herbarium sheet, thus not observed. Legume unknown.

TYPE COLLECTION: NICARAGUA. Bois, environs de Grenade, 40 m, Janvier 1870, Levy 419 (HOLOTYPE: P—plant "A" mounted on left side of sheet). Fig. 1.

The type specimen is mounted on a herbarium sheet along with another specimen labeled as "Herb. Mus. Paris, 1870, no. 20", which is mounted on the right side and labeled "B" by this author. It is to be excluded as part of the type specimen of *Centrosema seymourianum* as this specimen belongs to the genus *Phaseolus*. The type specimen includes only the specimen mounted on the left-hand side of the herbarium sheet, and which has been



Figure 1. Holotype of *Centrosema seymourianum* (Levy 419, P—plant "A" mounted on the left side of the herbarium sheet; excluding plant "B", Levy [?] 20, mounted on the right side of the herbarium sheet.)

labeled "A".

A key is provided below to the species of *Centrosema* reported to occur in Central America.

1. Leaflets 1; petiole winged (Mexico to Colombia) *C. sagittatum*
 1. Leaflets 3; petiole not winged.
 2. Flowers small, 2-4 cm long; leaflets commonly small, 3-7.5 cm long; bracteoles 4-10 mm long.
 3. Upper calyx teeth much shorter than the tube; leaflets with main lateral nerves divergent at right angles from the midrib (Honduras to Brazil) *C. angustifolium*
 3. Upper calyx teeth subequal to longer than the calyx tube; leaflets with main lateral nerves ascending from the midrib.
 4. Leaflets narrowly oblong or linear; legume short, weakly falcate (Costa Rica to Brazil) *C. pascuorum*
 4. Leaflets ovate to oblong; legume long, straight.
 5. Calyx teeth very unequal, upper and lateral teeth short, ca 2-3 mm long and subequal to the length of the tube, lowermost tooth much longer than the tube length, 5-8 mm long; legume 10-20 cm long, 5-7 mm wide; leaflets ovate, pubescent on both surfaces at least in the juvenile state, veinlets somewhat inconspicuous (Mexico to Brazil, W. Indies) *C. pubescens*
 5. Calyx teeth subequal, all much longer than the length of the tube, teeth ca 6-9 mm long; legume 6-12 cm long, 4-5 mm wide; leaflets ovate to oblong or linear-lanceolate, glabrate, veinlets conspicuously raised, prominent (Southeastern United States to Argentina, W. Indies, tropical Africa) *C. virginianum*
 2. Flowers large, 4-6 cm long; leaflets commonly large, (5) 7-14 cm long; bracteoles 10-20 mm long.
 6. Leaflets broadly ovate to rhombic-ovate, often drying black; flowers 4-5 cm long; bracteoles exceeding calyx by two to three times calyx length, ca. 15-20 mm long; calyx tube 5-7 mm with obsolete to short teeth to 2 mm long; legume 9-10 mm wide (Mexico to Brazil, W. Indies, tropical Africa) *C. plumieri*
 6. Leaflets oblong to elliptic-oblong or ovate-lanceolate, not drying black; flowers 5-6 cm long; bracteoles subequaling length of calyx tube and lowermost tooth, 10-13 mm long; calyx tube 4-5 mm long with conspicuous teeth subequal to longer than the tube length; legume 7-8 mm wide.
 7. Leaves ovate-lanceolate, subpilose below with trichomes spreading on the nerves; calyx sericeo-pilose, trichomes 0.5-1 mm long, conspicuous when viewed at 10X; vexillum gibbous (Mexico) *C. galeottii*²
 7. Leaves elliptic-oblong, glabrate with very sparsely appressed trichomes on the nerves; calyx glabrate with scattered uncinat trichomes (to 0.4 mm long), sparse on the tube and more densely compacted on the calyx lobes, conspicuous when viewed at 30X; vexillum spurred (Nicaragua) *C. seymourianum*

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² CENTROSEMA *galeottii* Fantz, *nom. nov.* Basionym: *Clitoria grandiflora* Mart. & Gal., Bull. Acad. Brux. 10: 189. 1843. Lectotype: *Galeotti* 3284 (BR!). Non *Centrosema grandiflorum* Benth. of Brazil.

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